1861MNRAS..22R..11B

The Lunar Crater Plato.

Mr. Birt communicated a series of observations of this well-known crater, embracing a period of eighteen months, viz., from January 1860 to July 1861, which he had arranged according to the Moon's age, so that they not only served as a record of the past, but can also be used as an Ephemeris, indicating to the observer the appearances likely to be seen, and thus form the basis of an accurate course of observations on the physical aspects of *Plato*, and by means of which changes, if any, may be detected. There are several sketches of the spot and also portions of it. The observations are preceded by an index, referring to the Moon's age at which each observation was made, and followed by a summary of objects suitable for further telescopic observation in or near *Plato*. The whole are bound in a volume, which is deposited in the Library for reference and circulation.

On an Instrument for comparing Colours, proposed to be designated a Homochromascope. By W. R. Birt, Esq.

In the course of my observations on the physical characteristics of the Moon's surface, I found it necessary to devise some means for comparing with known standards of colour the tints of various portions, especially the dark-floored craters, the extensive grey plains, and the more luminous districts in immediate proximity with the rayed craters. After various trials, I found the instrument of which a somewhat rough model is now exhibited* the best adapted for the purpose. It is intended to consist of a moveable cradle, possessing a rack-work motion receiving one of a series of glass plates; on each plate a certain number of disks are painted with transparent colours, each colour being experimentally determined by means of an instrument similar in its construction and action to the colour top. The numerical value of every tint can thus be precisely ascertained. The cradle, with its plate of glass, is moved within a box having a circular aperture, top and bottom, exactly equal to the coloured disk; so that, while the strong light of a lamp enclosed in a lantern is thrown on a highly reflective surface attached to the box, the disk is viewed by the light thus reflected and transmitted through it. In this way, while the eye carefully contemplates the tints of the lunar disk, it is also able to compare them with the tints

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* The model was exhibited at the Meeting.—Ed.

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on the glass plates, which, being properly arranged and numbered, the tints observed can be easily registered. The instrument, mounted on a tripod, may be conveniently placed near the telescope for observation.

It is highly important that, in all observations with an instrument of this kind, the flame of the lamp should always be of the same intensity. This may be secured by a simple arrangement in the construction of the lamp and the burner. The construction of the instrument ensures permanency of tint in every other respect.

Results of the Meridional Observations of Small Planets; Occultations of Stars by the Moon; and Phenomena of Jupiter's Satellites: observed at the Royal Observatory, Greenwich, during the months of June to October, 1861.

(*Communicated by the Astronomer Royal.*)

Iris ⑦.

Mean Solar Time of Observation.				R.A. from Observation.			N.P.D. from Observation.		
	h	m	s	h	m	s	°	′	″
1861, June 5	9	55	0·1	14	52	12·22	109	52	52·70
12	9	23	6·8	14	47	49·58	……		

Irene ⑭.

Mean Solar Time of Observation.				R.A. from Observation.			N.P.D. from Observation.		
	h	m	s	h	m	s	°	′	″
1861, Oct. 4	13	54	11·2	2	49	5·82	85	6	19·01
11	13	21	52·4	2	44	17·64	85	32	41·28
22	12	29	31·3	2	35	10·04	86	13	6·78
26	12	10	9·7	2	31	31·46	86	26	30·64

Phocæa ㉕.

Mean Solar Time of Observation.				R.A. from Observation.			N.P.D. from Observation.		
	h	m	s	h	m	s	°	′	″
1861, Sept. 20	12	18	24·9	0	17	51·36	65	43	23·93
26	11	50	33·2	0	13	35·10	67	34	32·82
27	11	45	55·0	0	12	52·76	67	54	11·71
30	11	32	2·8	0	10	47·92	68	54	43·27
Oct. 4	11	13	41·3	0	8	9·61	70	18	14·85
9	10	51	5·8	0	5	13·14	72	5	4·88
11	10	42	11·6	0	4	10·62	72	48	3·05
19	10	7	30·7	0	0	56·37	75	36	38·05

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